

WLAN & RFID

RF SOLUTIONS

AMC (U.FI & W.FI)
MCX
MMCX
MC-Card
RF Switches

RP-SMA
RP-BNC
RP-TNC
SSMB
Cable Assemblies

APPLICATIONS

802.11a, b, g & n
Access Points
Routers
Switches
RFID Readers
& Antennas

Ev-DO/Ev-DV Access Cards
Antennas
Laptops
Bluetooth
WiMax
Handheld Devices



Amphenol[®] RF

Global RF Solutions for the WLAN & RFID Market

Wireless Local Area Networks (WLANs) are growing rapidly at both the consumer and enterprise level and come in a number of flavors. The majority of the equipment on the WLAN market today is 802.11b. This equipment operates in the unlicensed 2.4 GHz band and has a maximum data rate of 11 Mbps. A competing technology is that of 802.11a. 802.11a offers 54 Mbps operating in the unlicensed 5GHz bands, but has reduced range. 802.11g is the future of the market. It offers the same data rates as 802.11a, but the increased distance of 802.11b. 802.11g also operates in the 2.4 GHz band and is backwards compatible with 802.11b equipment. 802.11n builds on previous 802.11 standards by adding multiple-input multiple-output (MIMO) and 40 MHz operation to the physical (PHY) layer. Dual and tri-band equipment is available that provides interoperability with more than one of the standards.

WiMAX is a standards-based technology enabling the delivery of last mile wireless broadband access as an alternative to cable and DSL. WiMAX will provide **fixed, nomadic, portable** and, eventually, **mobile** wireless broadband connectivity without the need for direct line-of-sight with a base station. In a typical cell radius deployment of three to ten kilometers, WiMAX Forum Certified™ systems can be expected to deliver capacity of up to 40 Mbps per channel, for fixed and portable access applications. Mobile network deployments are expected to provide up to 15 Mbps of capacity within a typical cell radius deployment of up to three kilometers. It is expected that WiMAX technology will be incorporated in notebook computers and PDAs in 2006, allowing for urban areas and cities to become "MetroZones" for portable outdoor broadband wireless access.

Ev-DO provides wireless data connections that are 10 times as fast as a regular modem, and compete directly with WiFi applications. Part of a family of cdma2000 1x digital wireless standards, 1xEV-DO is a "3G" standard that stands for "Evolution, Data-Only". Unlike other "1x" standards, Ev-DO only addresses data - not voice. 1xEV-DO offers very high data rates - up to 2.4 mbps - averaging 300-600 kbps in the real world. Another 1x standard is Ev-DV, which stands for "Evolution, Data and Voice". It addresses both data and voice, unlike 1xEV-DO. 1xEV-DV combines the high speed HDR technology from 1xEV-DO with the widely deployed 1xRTT standard. It integrates seamlessly with 1xRTT, providing full backward compatibility and simultaneous voice and data.

Radio Frequency Identification, or RFID, is a generic term for technologies that use radio waves to automatically identify people or objects. There are several methods of identification, but the most common is to store a serial number that identifies a person or object, and perhaps other information, on a microchip that is attached to an antenna (the chip and the antenna together are called an RFID transponder or an RFID tag). The antenna enables the chip to transmit the identification information to a reader. The reader converts the radio waves reflected back from the RFID tag into digital information that can then be passed on to computers that can make use of it. An alternative to bar coding, advantages include data capacity, read/write capability, and no line-of-sight requirements.

Please visit us online at www.AmphenolRF.com to learn more about our product offering for these markets, or contact your local Amphenol RF sales rep.